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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,505	08/27/2003	Yosuke Inomata	81872.0051	6972

26021 7590 03/09/2006

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EXAMINER

OLSEN, ALLAN W

ART UNIT PAPER NUMBER

1763

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/650,505

Applicant(s)

INOMATA ET AL.

Examiner

Allan Olsen

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-15, 18-20 and 23-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-15, 18, 19 and 23-40 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date Jan. 24, 2006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 15 and 37 are objected to because of the following informalities: Claims 15 and 37 recite, "...while securing a distance of 5 mm to 30 mm" implying that the distance between the substrate and the plate is limited to the range set forth. It would be preferable to explicitly recite "between the substrate and plate" in connection with the recited distance.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13, 14, 18, 19, 23-27, 30, 32-36, 38 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,254,215 issued to Terakado et al. (hereinafter, Terakado).

Terakado teaches a reactive ion etching method wherein a metallic mesh shadow mask is placed above a silicon substrate to be etched (column 6, lines 49-63). Terakado teaches using a mask having 40% open area (column 6, lines 62-63). As Terakado discloses the same process as being claimed by applicant, Terakado is expected to achieve the same results. As such, Terakado's process would inherently clean the plate.

Claims 13-15, 18, 19, 23, 25, 26, 30, 32-34 and 36-39 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4,523,971 issued to Cuomo et al. (hereinafter, Cuomo).

Cuomo teaches a reactive ion etching method wherein a metallic shadow mask is placed above a silicon substrate to be etched (column 4, lines 50-53). Cuomo teaches the mask may be placed at a distance of a few millimeters to tens of millimeters from the substrate, for example 5 mm (column 6, lines 33-36, column 7, lines 1-2). As Cuomo discloses the same process as being claimed by applicant, Cuomo is expected to achieve the same results. As such, Cuomo's process would inherently clean the plate.

Claims 13-15, 18, 19, 23, 25, 26, 30-34 and 36-40 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4,243,506 issued to Ikeda et al. (hereinafter, Ikeda).

Ikeda teaches a reactive ion etching method wherein an aluminum shadow mask is placed above a silicon substrate to be etched (abstract; figure 3; column 3, lines 32-39; column 4, line 14). Ikeda teaches the mask may be placed at a distance of 5 mm (column 4, line 11). As Ikeda discloses the same process as being claimed by applicant, Ikeda is expected to achieve the same results. As such, Ikeda's process would inherently clean the plate.

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over one of Terakado, Cuomo or Ikeda in view of US Patent 6,316,289 issued to Chung.

Terakado, Cuomo nor Ikeda teach forming the plate member by laminating a plurality of spaced apart long members.

Chung teaches forming a standoff mask by laminating a plurality of spaced apart long members.

It would have been obvious to one skilled in the art to form the standoff mask according to the method taught by Chung because Chung teaches that this provides a durable and precise masks (column 4, lines 38-48).

Allowable Subject Matter

Claim 20 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Olsen whose telephone number is 571-272-1441. The examiner can normally be reached on M-F 1-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Allan Olsen', with a stylized flourish at the end.

Allan Olsen
Primary Examiner
Art Unit 1763